UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,127	07/11/2003	Gopal Dommety	50325-0779	4418

29989 7590 10/18/2006	EXAMINER
HICKMAN PALERMO TRUONG & BECKER, LLP	YALEW, FIKREMARIAM A
2055 GATEWAY PLACE	

ART UNIT	PAPER NUMBER
2136	

SUITE 550
SAN JOSE, CA 95110

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/618,127	DOMMETY ET AL.
	Examiner	Art Unit	
	Fikremariam Yalew	2136	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *11 July 2003*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-25* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-25* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *11 July 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a) ☐ All　b) ☐ Some * c) ☐ None of:

　　　1. ☐ Certified copies of the priority documents have been received.

　　　2. ☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date *10/14/2003*.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-25 have been examined.

Claim Rejections - 35 USC § 101

2.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3.   Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4.   Claim 23 is directed to a computer readable medium carrying one or more sequence of instruction of restricting address resolution protocol (ARP) table to updates to updates originating from authorized subsystem. The examiner respectfully asserts that the claimed subject matter does not fall within the statutory classes listed in 35 USC 101.Claim 23 is directed to a computer readable media that includes data signals (See specification 0065). A signal does not fall within one of the four statutory classes of 101.Claim 23 is rejected as being directed to data signal.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-2,6-8,10-13,23-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Sharma et al (hereinafter referred as Sharma) US 6,754,716.

7.   As per claims 1,23-25: Sharma discloses a method/computer-readable medium/apparatus of restricting Address Resolution Protocol (ARP) table updates to updates originating from authorized subsystems, the method comprising:

receiving an instruction to update an ARP table(See Fig 6 step 602 and col 2 lines 39-43); determining whether a particular subsystem from which the instruction originated is authorized(See Fig 6 step 604 and col 3 lines 12-34); and if the particular subsystem is authorized(See Fig 6 step 604 and col 3 lines 12-34), then updating the ARP table based on the instruction(See Fig 6 step 606 and col 2 lines 55-65 and col 7 lines 9-19)

8.   As per claim 2: Sharma discloses the method wherein determining whether the particular subsystem is contained in a set of one or more specified subsystems (See col 5 line 44 through col 6 line 10).

9.   As per claim 6: Sharma discloses the method further comprising: if the particular subsystem is not authorized, then preventing the ARP table from being updated based on the instruction (See Fig 5 step 504)

10.   As per claim 7: Sharma discloses the method further comprising: if the particular subsystem is not authorized, then performing the steps of: determining whether a

particular network interface through which the instruction was received is contained in

a set of one or more specified network interfaces (See col 5 line 44 through col 6 line

10 and Fig 5 steps 502, 504); if the particular network interface is contained in the set,

then preventing the ARP table from being updated based on the instruction (See Fig 5

step 504 and col 7 line 1-9); and if the particular network interface is not contained in

the set, then updating the ARP table based on the instruction(See Fig 5 step 504 and

col 7 line 1-9).

11.   As per claim 8: Sharma discloses the method further comprising: if the particular

            subsystem is not authorized, then performing the steps of: determining

            whether a particular network address indicated by the instruction is

            contained in a set of one or more specified network address (See col 5

line 44 through col 6 line 10 and Fig 5 steps 502, 504); if the particular network

address is contained in the set, then preventing the ARP table from being updated

based on the instruction (See Fig 5 step 504 and col 7 line 1-9); and if the particular

network address is not contained in the set, then updating the ARP table based on the

instruction(See Fig 5 step 504 and col 7 line 1-9).

12.   As per claim 10: the method wherein the ARP table is updated only in response

to instructions that are not ARP message (See col 3 lines 6-34).

13.   As per claim 11: the method wherein determining whether the particular system

is authorized comprises determining whether the particular subsystem is a Hypertext

Transfer Protocol (HTTP) server (See col 4 lines 22-51).

14.   As per claim 12: Sharma discloses a method of restricting Address Resolution

Protocol (ARP) table updates to updates originating from authorized subsystems,

the method comprising:

receiving an instruction to update an ARP table(See Fig 6 step 602 and

col 2 lines 39-43);

determining whether a particular network interface through which the instruction

was received is contained in a set of one or more specified network interfaces(See col

5 line 44 through col 6 line 10); determining whether a particular network address

indicated by the instruction is contained in a set of one or more specified network

addresses(See Fig 6 step 604 and col 3 lines 12-34);

if the particular network interface is not contained in the set of one or more

specified network interfaces, and if the particular network address indicated by the

instruction is not contained in the set of one or more specified network addresses, then

updating the ARP table based on the instruction(See col 2 lines 55-65 and col 7 lines

1-9); and

if the particular network interface is contained in the set of one or more specified

network interfaces, of if the particular network address is contained in the set of one or

more specified network addresses, then performing steps comprising: determining

whether a particular subsystem from which the instruction originated is

authorized(See Fig 6 step 604 and col 3 lines 12-34); if the particular subsystem

is authorized, then updating the ARP table based on the instruction(col 7 lines

9-15); and if the particular subsystem is not authorized, then preventing the ARP table

from being updated based on the instruction(See col 7 lines 1-9).

15.   As per claim 13: Sharman discloses wherein receiving the instruction to update

the ARP table comprises receiving and ARP message that indicates an association

between a network layer address and a data link layer address.(See Fig 2 step 200

and Fig 6 step 606)

16.   Claims 14-22 are rejected under 35 U.S.C. 102(e) as being anticipated by

Massarani (hereinafter referred as Massarani) US 6,393,484 B1.

17.   As per claim 14: Massarani discloses the method of sending an instruction

to update an Address Resolution Protocol (ARP) table in a system in which ARP table

updates are restricted to updates originating from authorized subsystems, the method

comprising: receiving a Dynamic Host Configuration Protocol (DHCP) message that

indicates a network layer address (See Fig 3 step 308 and col 5 lines 31-54); in

response to receiving the message, determining whether the network layer address is

bound with a data link layer address (See Fig 3 step 310 and col 5 lines 31-54); and if

the network layer address is not bound with a data link layer address, then sending an

instruction to update an ARP table(See Fig 4 step 416 and col 5 lines 31-54).

18.   As per claim 15: Massarani discloses the method wherein the instruction is to

update the ARP table to contain a binding between the network layer address and

data link layer address of a DHCP client that sent the message (col 5 lines 31-54)

19.   As per claim 16: Massarani discloses the method comprising determining

whether a lease associated with the network layer address has expired (See col 7

lines 27-37); and if the lease has expired, then sending an instruction to update the

ARP table (See abstract).

20.   As per claim 17: Massarani discloses the method determining whether a lease

associated with the network layer address has expired (See col 7 lines 27-37); and if

the lease has expired, then sending an instruction to remove, from the ARP table, an

entry that contains the network layer address (See col 7 lines 27-37).

21.   As per claim 18: Massarani discloses the method comprising receiving a

particular DHCP message requests an extension of a lease (See abstract); and

response to receiving the particular DHCP message, sending an instruction to update

the ARP table (See abstract).

22.   As per claim 19: Massarani discloses the method comprising receiving a

particular DHCP message that relinquishes a lease (See abstract); and in response to

receiving the particular DHCP message, sending an instruction to update the ARP

table (See abstract).

23.   As per claim 20: Massarani discloses the method comprising if the network

layer address is not bound with a data link layer address, then sending an instruction

to start a process in connection with the network layer address (See col 5 lines 25-54).

24.   As per claim 21: Massarani discloses the method comprising determining

whether a lease associated with the network layer address has expired (See Fig 6

step 603); and if the lease has expired, then sending an instruction to stop a process

in connection with the network layer address (See Fig 6 step 603 and col 7 lines 9-23).

25.   As per claim 22: Massarani discloses the method comprising receiving a

particular DHCP message that relinquishes a lease (See Fig 6 step 601); and in

response to receiving the particular DHCP message, sending an instruction to stop a

process in connection with the network layer address (See Fig 7 step 704 and col 7

lines 9-23).

Claim Rejections - 35 USC § 103

26.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

27.   Claims 3-5, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Sharma et al (hereinafter referred as Sharma) US 6,754,716 in view of Massarani (US

6,393,484 B1).

28.   As per claim 3: Sharma discloses claim 1 as recited above. Sharma does not

disclose the method wherein determining whether the particular subsystem is

authorized comprise determining whether the particular subsystem is contained in a set

on one or more specified subsystems. However Massarani discloses determining

whether the particular subsystem is authorized comprise determining whether the particular subsystem is contained in a set on one or more specified subsystems (See col 3 lines 16-57).Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to employ the teachings method of Massarani within Sharma method in order to enhanced the security of the system.

29.   As per claim 4: Sharma discloses claim 1 as recited above. Sharma does not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is NAT server. However Massarani discloses determining whether the particular system is authorized comprises determining whether the particular subsystem is an NAT server (See abstract and 0087). Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to employ the teachings method of Massarani within Sharma method in order to enhanced the security of the system.

30.   As per claim 5: Sharma discloses claim 1 as recited above. Sharma does not disclose the method wherein determining whether the particular system is authorized comprises determining whether the particular subsystem is an authentication authorization accounting (AAA) server. However Massarani discloses determining whether the particular system is authorized comprises determining whether the particular subsystem is an authentication authorization accounting (AAA) server (See abstract and 0087). Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to employ the teachings method of Massarani within Sharma method in order to enhanced the security of the system.

31.   As per claim 9: Sharma discloses claim 1 as recited above. Sharma does not

discloses the method comprising determining whether a specified amount of time has

passed since a time indicated by a timestamp associated with an entry in the ARP table;

and if the specified amount of time has passed then removing the entry from the ARP

table. (See abstract). Therefore it would have been obvious to one ordinary skill in the

art at the time the invention was made to employ the teachings method of Massarani

within Sharma method in order to enhanced the security of the system.

Conclusion

32.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Fikremariam Yalew whose telephone number is

5712723852. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Nasser Mozzami can be reached on 571-272-4195. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-4195.
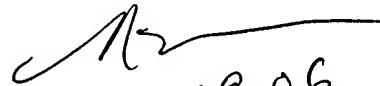
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